

WHAT IS CLAIMED IS:

1. An antilock brake control system for a vehicle, comprising: normally-opened solenoid valves interposed between wheel brakes and a braking fluid pressure generating means; normally-closed solenoid valves interposed between the wheel brakes and reservoirs; current supply control means connected in series to coils of the normally-opened solenoid valves to control the supply of electric current to the coils; diodes which bypass the coils and which connect the current supply control means and an earth to each other or connect a power source and the current supply control means to each other, while permitting the flowing of the electric current toward the power source; wheel speed sensors for detecting wheel speeds; and an antilock control means adapted to determine a tendency in the locking of each wheel based on wheel speeds detected by the wheel speed sensors and to control the supply of electric current to the normally-opened solenoid valves and the normally-closed solenoid valves in accordance with the result of the determination; the antilock control means being adapted to switch the state of each of the normally-opened solenoid valves over a turned-on state in which a predetermined first electric current is permitted to flow through the coil, a turned-off state in which the supply of the electric current to the coil is stopped, and a middle state in which a second electric current lower than the first electric current is permitted to flow through the coil, in the control of the supply of the electric current to the normally-opened solenoid valves,

wherein the antilock brake control system further includes

a switch means which is mounted between the diode and the current supply control means or between the diode and the earth, and whose electrical connecting and disconnecting operations are controlled by the antilock control means, and the antilock control means is adapted to maintain the switch means in an electrically disconnecting state during shifting of each of the normally-opened solenoid valves from the turned-on state to the middle state, until the shifting is completed.

2. An antilock brake control system for a vehicle, comprising: normally-opened solenoid valves which are interposed between wheel brakes respectively mounted on front wheels and rear wheels and a braking fluid pressure generating means and which individually correspond to the wheel brakes; normally-closed solenoid valves which are interposed between the wheel brakes and reservoirs and which individually correspond to the wheel brakes; current supply control means connected in series to coils of the normally-opened solenoid valves respectively for controlling the supply and cutting-off of electric current to the coils; diodes which bypass the coils and which connect the current supply control means and an earth to each other or connect a power source and the current supply control means to each other, while permitting the flowing of electric current toward the power source; wheel speed sensors for detecting wheel speeds of the wheels, respectively; and an antilock control means adapted to determine a tendency in the locking of each wheel based on the wheel speeds detected by the wheel speed sensors and to control the supply of

electric current to the normally-opened solenoid valves and the normally-closed solenoid valves independently for the front wheels and the rear wheels in accordance with the result of the determination,

wherein a switch means is connected in series to only the diodes which correspond to the normally-opened solenoid valves for the front wheels among the diodes individually corresponding to the normally-opened solenoid valves.

3. An antilock brake control system for a vehicle, comprising: normally-opened solenoid valves which are interposed between wheel brakes respectively mounted on front wheels and rear wheels and a braking fluid pressure generating means and which individually correspond to the wheel brakes; normally-closed solenoid valves which are interposed between the wheel brakes and reservoirs and which individually correspond to the wheel brakes; current supply control means connected in series to coils of the normally-opened solenoid valves respectively for controlling the supply and cutting-off of electric current to the coils; diodes which bypass the coils and which connect the current supply control means and an earth to each other or connect a power source and the current supply control means to each other, while permitting the flowing of electric current toward the power source; wheel speed sensors for detecting wheel speeds of the wheels, respectively; and an antilock control means adapted to determine a tendency in the locking of each wheel based on the wheel speeds detected by the wheel speed sensors and to control the supply of

electric current to the normally-opened solenoid valves and the normally-closed solenoid valves independently for the front wheels and the rear wheels in accordance with the result of the determination,

wherein the diode corresponding to each of the normally-opened solenoid valves for the front wheels has a capacity which is set at a value smaller than that of the diode corresponding to each of the normally-opened solenoid valves for the rear wheels.

4. An antilock brake control system for a vehicle, comprising: normally-opened solenoid valves which are interposed between wheel brakes respectively mounted on left and right front wheels and left and right rear wheels and a braking fluid pressure generating means and which individually correspond to the wheel brakes; normally-closed solenoid valves which are interposed between the wheel brakes and reservoirs and which individually correspond to the wheel brakes; current supply control means connected in series to coils of the normally-opened solenoid valves respectively for controlling the supply and cutting-off of electric current to the coils; diodes which bypass the coils and which connect the current supply control means and an earth to each other or connect a power source and the current supply control means to each other, while permitting the flowing of electric current toward the power source; wheel speed sensors for detecting wheel speeds of the wheels, respectively; and an antilock control means adapted to determine a tendency in the locking of each wheel based on the wheel speeds detected by the wheel speed sensors and

to control the supply of electric current to the normally-opened solenoid valves and the normally-closed solenoid valves in such a manner to simultaneously carry out select-low controls for the left and right rear wheels in accordance with the result of the determination,

wherein a switch means is connected in series to only those of the diodes individually corresponding to the normally-opened solenoid valves which individually correspond to the left and right rear wheels.

5. An antilock brake control system for a vehicle, comprising: normally-opened solenoid valves which are interposed between wheel brakes respectively mounted on left and right front wheels and left and right rear wheels and a braking fluid pressure generating means and which individually correspond to the wheel brakes; normally-closed solenoid valves which are interposed between the wheel brakes and reservoirs and which individually correspond to the wheel brakes; current supply control means connected in series to coils of the normally-opened solenoid valves respectively for controlling the supply and cutting-off of electric current to the coils; diodes which bypass the coils and which connect the current supply control means and an earth to each other or connect a power source and the current supply control means to each other, while permitting the flowing of electric current toward the power source; wheel speed sensors for detecting wheel speeds of the wheels, respectively; and an antilock control means adapted to determine a tendency in the locking of each wheel

based on the wheel speeds detected by the wheel speed sensors and to control the supply of electric current to the normally-opened solenoid valves and the normally-closed solenoid valves in such a manner to simultaneously carry out select-low controls for the left and right rear wheels in accordance with the result of the determination,

wherein each of the diodes individually corresponding to the normally-opened solenoid valves for the left and right rear wheels has a capacity which is set at a value smaller than that of each of the diodes individually corresponding to the normally-opened solenoid valves for the left and right front wheels.